# TENNESSEE FARMER.

How much more delightful to an undebauched mind is the task of making improvements on the earth than all the vain glory which can be acquired from ravaging it, by the most uninterrupted career of conquests."—WASHINGTON.

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## TENNESSEE FARMER.

*Jonesborough, May, 1839.*

### Female Education.

An inappropriate subject, some may think, for an agricultural Journal. But there needs no great gift of discernment to perceive that the farmer is especially and peculiarly interested in this topic. The home of every householder should indeed be his little world of happiness; but the farmer, partially cut off from the society of the crowded city or the social village, is most emphatically concerned to have his domestic circle enlivened with the charm of an intelligent wife and educated daughters.

But here, as with almost every thing else that is good, we are met with prejudices deeply fixed in the heart of unreflecting ignorance, and often, we regret to say, countenanced and encouraged by the intelligent essayist and the popular orator. How frequently do we hear the sentiment expressed: Where is the use of learning a young woman to thrumb a piano, or paint a flower, or jabber French, or talk learnedly about the sciences, when all these accomplishments do not fit her for the actual realities of life, do not give her any preparation for the duties of housekeeping, but leave her entirely ignorant how to cook a pudding, or make a bed, or stitch a garment? And in aid of this aspect of the case, the *ad captandum* speaker talks very plausibly about the great defects in our systems of female education, the terrible evils of our female boarding schools, and some ill-digested and visionary suggestions of a plan of a school which, when interpreted, signify only a huge kitchen full of female cooks, and a description of an educated woman, which means merely an accomplished house-maid.

This taste for culinary education, seems indeed to have become vastly popular. An anecdote has been recently travelling the rounds of the agricultural papers, with great eclat, somewhat to this effect: A young farmer married an educated wife, and brought her home to manage his domestic concerns; but finding her totally unacquainted with housekeeping, unable to cook, or scrub, or wash, he forthwith took her back, and telling her father that "she was not up to the sample," resolutely refused to have any thing more to do with her. The narrator of this beautiful incident, commending the young farmer for his *spunk*, adds that such a wife is indeed a useless piece of furniture, no better than a statue of the Venus de Medicis, not so much worth indeed as Lot's wife would be, for she at least would serve to salt his bacon.

Now, aside from the brutality of the sentiment embodied in this anecdote, it flies wide of the mark when brought forward as an illustration of the evils of our present systems of female education, being indeed totally irrelevant, as we shall presently show. But this may be taken as a fair sample of the singular want of reflection frequently evinced by those discussing this subject, who ought to know better.

We beg our readers not to take the above as any evidence that we undervalue those qualities in woman which fit her for the practical duties of domestic life, or that our *beau ideal* of a good wife or dutiful daughter could be complete without the addition of these more solid accomplish-

ments which contribute so largely to the "creature comforts" of this life. We know too well the value of good housekeeping to undervalue it one iota; but we do insist that the complaints which are so frequently made of our existing systems of female education, evince but little judgment, reflection or common sense. That there are gross errors in many of these systems, and that they are more prevalent at some schools than others, cannot be denied for a moment. But the general grievance complained of, that these schools leave our youthful female population unfitted for the actual duties devolving upon them in the domestic circle, we repeat, is totally misapplied when the fault is laid at the door of these institutions.

What do our Female Schools propose to teach? Not cooking, nor scouring, nor washing, nor spinning, nor weaving, nor even the sublime mystery of mending breeches, (a most excellent accomplishment, by the by, which we, by no means, wish to disparage.) Not being pledged to any such instruction as this, it is obvious to the most obtuse intellect and the plainest sense of justice, that they are not responsible for the non-performance of this task. On whom then does it rightfully and naturally devolve? *Our* reply would be, upon the mother at home, who has the best opportunities, and ought to be the best qualified to imbue her daughters with right principles of thrift, economy, cleanliness, taste, energy and skill, in "guiding the house," and superintending all its important internal interests. We believe that there can be no means employed so admirably adapted to the end proposed, as the judicious exertion of this maternal influence and instruction which have, in fact, hitherto proved amply efficient without any extraneous aid; as the housekeeping of our people, to say the least of it, is not one among our national faults. We would, therefore, respectfully suggest to those who complain, that all this is not taught at our female schools, that they change their point of attack and where they find an educated young woman unfitted for the duties of housekeeping, that they go with all speed, and talk it out with the old ladies, where the responsibility undoubtedly rests in all such cases.

But do our Female Schools indeed effect nothing for the numerous pupils who attend them? Doubtless there are some which, casting off the restraints and putting out the lights of moral and religious principle in their systems of instruction, do indeed effect little but evil with the victims of their unfaithfulness, begetting in them merely a taste for fashionable vice, and a cold contempt for all the enjoyments and duties of domestic life.—But these are generally the superlatively fashionable schools of the crowded and luxurious city, which our friends, the croakers aforesaid, may abuse to their hearts' content, and we will cordially join them.

But if it is the object and the result of the far larger portion of these schools, (as there cannot be a doubt that it is) to elevate and refine the mental and moral nature of the pupils confided to their training; to inspire them with more expanded and juster conceptions of the sphere they are to occupy in life, and the duties involved in their position in society; if it is important that they be prepared to discharge these duties with judgment and intelligence and adequately to fill their appropriate places as the companions and counsellors and mothers of the "lords of creation," then should our female seminaries be cherished as second in importance to no literary institutions of the age, but as exerting an untold influence upon the morals and manners of society, and ultimately upon the national destinies of our common country.

It is scarcely necessary, in this connexion, to dwell upon the important bearings of early maternal influence and instruction; for these are now fully appreciated by all who investigate the subject, and have been often brilliantly illustrated alike by arguments drawn from the philosophy of the human mind, and by actual facts which crowd the annals of men and nations. The Spartan mother who was true to her trust, reared up her sons to be heroes, just as infallibly, as the degraded wife of the Hindoo impresses upon *her* children the national characteristics of falsehood and dishonor. The early maternal training of that great master spirit of poesey, Lord Byron, as inevitably made him a misanthrope and a spirit of evil, as the wise and pious discipline of the mother of Washington rendered *her* son the praised of every tongue and the loved of every heart.

How vastly important then that this plastic

signet of human character should itself be moulded aright, that it pollute the yielding wax with no false or evil impression. How important that the fountain be kept pure and untroubled, whose waters make, or mingle with, all the tides of human affairs, individual, social or political! And how is this momentous end to be achieved without the aid of the female school, enlightening the intellect and regulating the affections of those who are to be the mothers of the next generation.

Admitting it then to be altogether desirable and proper that females should know how to minister to the physical wants of their families, yet of how much greater moment to be able to understand the wants, and shape the destinies of the immortal mind. We profess to loathe the sensuality of the oriental voluptuary, who crowds his seraglio with hundreds of beautiful slaves to minister to his lust, or pride, or tyranny; and our virtuous indignation is unbounded towards the unnatural parent who trains up and devotes his daughter to this odious vassalage. But how much better is it in a Christian father to rear up an uneducated daughter to become a mere convenient drudge to cater for the purely animal wants of a husband and his household, in this Christian land? A nice scrutiny will fail to detect any very material difference of principle in the two cases. Woman was designed to be the companion of educated man; and she is degraded from her high destiny when denied this post of honor and usefulness, whether the end be accomplished by an unnatural incarceration within the walls of a harem, or, the responsibilities of the wife and mother being cast upon her in a civilized and Christian country, she is found, from defect of education, utterly inadequate to the momentous duties growing out of those relations of life.

It is indeed gratifying to know that the importance of female education is now justly appreciated by a large proportion of our people. In our own section of the country, it seems to be attracting far more attention, even, than the education of the other sex, and, completely reversing the olden ideas on this subject, the apprehension seems now to be entertained that the males will scarcely be found the intellectual companions of the females of the next generation. Be this as it may, we heartily rejoice in the success of our numerous female schools, and hope they will continue to increase and prosper until their advantages are brought within the reach, and press themselves upon the notice, of every farmer in the land.

## Successional crops of Vegetables in the Garden.

The labors of the gardener are little more than just begun when his first crops of summer vegetables are planted. Peas, lettuce, radishes, beans, and other vegetables which are eaten while green and tender, should be planted every two weeks, in successional crops, while the season lasts.—This will furnish abundant occupation in the garden throughout the summer, and fresh supplies for the table until autumn frosts.

Nothing is more common than complaints of the want of vegetables early in the spring. It would be reasonable to suppose that those who have been making these complaints this spring, have taken especial care to provide against the recurrence of the grievance another season, by planting abundant crops of beets, parsnips, salsafie, carrots, and particularly that most valuable of all roots, the potatoe. This present month is the best time for planting potatoes for winter supplies; but the first mentioned vegetables should have been put in the ground during the last month at least, if not earlier. We would, however, earnestly advise those who have permitted the right time to pass by without having planted a plentiful quantity of these very valuable crops, that they without delay put another and abundant crop in the ground, as they will, if taken care of, still amply reward the labor of cultivation.

## To destroy Bed-bugs,

Do not use scalding water or even the steamer, for these spoil the bedstead. Neither is it worth while to resort to tomatoe vines, camphor and other nostrums of like character, for they are generally inefficacious, and therefore useless; but get a little mercurial ointment, smear the hiding places of the bug on and about the bedstead, and this odious nuisance so annoying to housekeep-

ers, but especially to those who do not happen to have a taste for such bed-fellows, will be at once effectually and infallibly removed.

## Durham Bull.

Our enterprising townsman, Lawson Clifford, Esq., has brought to our county a fine looking animal, whose appearance and pedigree (which has been exhibited to us) indicate good blood, the larger ratio of which is of the Durham Short-Horn strain, so highly and justly prized by the breeders of the day. We hope our farmers will avail themselves of the opportunity to improve their breeds of neat cattle.

## Enquiry.

Joel H. Berry, Esq., writes us as follows: "I expect to plant some Baden corn this year, for the first time. I have understood that it produces more succours than any other kind of corn, and that they yield, in many instances, almost as much as the main stalk. Will you, therefore, be pleased to inform me whether the succours should be pulled out or suffered to remain?"

Corn planted on thin soil should be suecoured; on rich or highly manured lands it should not.—The reason of this distinction is obvious. A poor soil has enough to do to perfect the ears on the main stalk, without the extra demand upon it for sustenance for the side shoots; while strong or manured land may reasonably be taxed higher and with better hopes of a fair return. Judge Buel, of the Albany Cultivator, who is considered high authority in such matters, says he never succours his corn.

The Baden corn requires a rich soil and thorough tillage for the full perfection of its many ears; nor is there any magic in the name, or in the thing itself, that will obviate the necessity of strict attention to these important particulars.

To PREVENT SHEEP FROM CATCHING COLD AFTER BEING SHORN.—Sheep are sometimes exposed to cold winds and rains immediately after shearing, which exposure frequently hurts them. Those farmers who have access to the sea, should plunge them into the salt water; those who have not that opportunity, and whose flocks are not very large, may mix salt with water and rub them all over, which will in a great measure prevent any mishap befalling the animal, having been stript of its coat.

It is very common in the months of June and July, for some kinds of sheep, especially the fine Leicester breed, which are commonly thin skinned about the head, to be struck with a kind of fly, and by scratching it with their feet, they make it sore and raw. To prevent this, take tar, tram oil, and salt, boil them together, and when cold, put a little of it on the part affected. This application keeps off the flies and likewise heals the sore. The salt should be in a very small quantity, or powdered sulphur may be used instead of it.—*Exchange Paper.*

"GAP" IN CHICKENS.—The Farmers' Cabinet being a medium through which much useful information has been disseminated, I am induced to send the following remedy for the "gap" in chickens. My little son last spring undertook the management of the poultry, and was much troubled by his young chickens dying off with the above mentioned disease. He finally discovered the cause by dissecting one, and numerous long worms, about the thickness of a common pin, were found in its wind-pipe. He then took a feather, and stripped it, except a small tuft on the end, dipped it in spirits of turpentine, and inserted it into the wind-pipe of the affected chickens, turning it around two or three times before withdrawing it. It was attended with the most complete success, and appeared to give immediate relief. In a few cases it required a repetition. The disease was very soon eradicated from his flock, and he afterwards raised more than one hundred and forty chickens. The entrance to the wind-pipe is on the top of the tongue, and near its root, and may easily be discovered by holding the chicken's bill open a short time.

*Farmers' Cabinet.*

*From the Vermont Watchman.*

MESSRS. EDITORS—Just say to the numerous readers of the Watchman, that a solution of salt and water is the best remedy for the swelling of the udder of that useful animal, the cow—to be applied cold. Also, that saltpetre given twice each day, morning and night, in doses from ½ to 1 teaspoonful at each time, is a sure remedy for garget.

A SUBSCRIBER.

BARLEY MUSH.—One pound of barley will give the consistence of pudding, to one gallon of water; but it requires to be boiled five hours to bring it to this consistence.

## CULTURE OF BEET SUGAR.

### THE MEMORIAL OF C. L. FLEISCHMANN.

[*Concluded.*]

The importance of Mr. Scheutzenbach's discovery is best proved by chemical analysis and examination of the physiology of plants. This analysis of the beet-root shows that 100 parts of the root contain—

86.3 parts of water,
3.2 parts of fibrous matter,
10.0 parts of crystalizable sugar,
10.5 parts of mucilage.

By the new process, the water in the beet is evaporated, and there remain only 13.7 parts of dry substance, which consists of the sugar, mucilage, and fibrous matter.

The sugar dissolves in cold or warm water almost instantaneously.

The mucilage is insoluble in water; when in a dry state, and mixed with water, it only swells to a slimy matter.

The fibrous matter is insoluble, and has neither in the old nor new process any injurious influence.

From this analysis, we learn that the mucilage is the only substance which causes all the difficulties of the extraction of sugar. The principal process consists, then, in the separation of the mucilage from the sugar. But is this mixture a work of nature, or the result of the manipulations? Or, does the cellular tissue, of which the beet-root is formed, contain the sugar in its pure state, separated from the mucilage?

These are questions as to the physiology of the beet, which were first suggested by Raspail, a French chemist, (in his work on the physiology of plants, Paris, 1837,) and he solved these important problems by the following microscopic experiments.

"When a thin slice of the red beet-root is brought under the focus of a microscope, it will be observed that the texture of the beet is formed of hexagonal cells, transparent, and of a purple color; these cells are crossed by white ones, four or five times longer than the purple cells; this tissue of white cells is crossed again by bundles of opaque cylinders, of a gray color, through through which the spirals (*elements generateurs*) are observed.

"When a drop of acid (*acid sulchurique albumineux*, which has the property of coloring saccharine substances purple) is put on this thin slice, the colors change; the part which was purple turns yellowish, the long cells remain white, but the opaque cylinders become purple."

From this it follows that the cells, naturally purple, enclose the coloring matter and the mucilage, and the opaque cylinders the sugar in its pure state. Thus the mucilage in the beet-root is separated by nature from the sugar, and mixed during the manipulation, which caused all the difficulties of the extraction in the old process, when the mucilage was combined with the sugar in grating, pressing, and even in defaction.

To separate this five-tenths parts of mucilage which the beet contains, occasioned not only the loss of considerable sugar, but also labor, fuel, and costly material, as, for instance, animal charcoal, blood, &c.

The new process acts entirely in conformity with the results of scientific investigation, and the whole process is reduced to a simple operation, which gives a sure gain of eight per cent. of white refined sugar from one hundred pounds of the raw beet-root.

The beets are now cut in thin slices, dried before any fermentation can take place, ground to fine powder, so all cells are broken apart, and mixed with water which dissolves the sugar before the mucilage begins to swell. The pure uncolored liquor obtained is evaporated, and the sirup brought into moulds to crystallize.

These statements should be considered as a sufficient proof of the infallibility and practicability of the new improvement; and the introduction and general adoption of it in this country would be of the highest importance to the welfare of its population.

Some enterprising citizens of the United States sent agents to France to investigate the manipulations of this branch of industry; but the results have yet effected very little, and the sugar produced from the beet in this country is of no great account, which arises probably from the want of skilful and intelligent operators in the former complicated manipulations. But, at present, in Europe, the manipulations are reduced to a process much *simpler than brewing common table beer*, which can be comprehended and performed by every person. The period is not distant, when farmers will produce their own sugar, or at least raise and dry the beet ready for the manufacturer.

The general argument against the introduction of this branch of industry, that labor is too high in the United States, is incorrect, when we consider the other great advantages which the United States have over every country on the globe in almost every business, and especially in this branch of industry:

1st. The United States possess a climate which suits the beets better than any climate of Europe, because the summers are excessively warm, which increases the saccharine property of the beet-root.

2d. Plenty of cheap and rich land, subject to but a small tax.

3d. Inexhaustible stores of fuel, from which the great natural water courses, rail roads and canals branch, over the whole Union.

4th. Well-constructed labor-saving machines of all kinds.

5th. An intelligent population, which, when once acquainted with this branch of industry, will soon bring it to great perfection—a population understanding the use and management of machinery, and famous for improvements and inventions. Whereas, in Europe, the land is over-taxed, high in price, and therefore the interest upon it considerable; subject to *tithes* and other burdens, while the fuel is scarce and valuable, and its transportation high and slow. The population are entirely unacquainted with labor-saving machines, and possess very little mechanical ingenuity, while their enterprize is prohibited by the excise laws of their petty governments.

It is obvious that America overbalances with its advantages, the low prices of labor in Europe; and that she is able, not only to provide herself with all the sugar wanted for home consumption, but also to supply other countries.

The sugar now produced in Louisiana, averages only about four and a half pounds per head for the population of the United States, or about 70,000,000 pounds annually, which is but a small part of our consumption, as enormous sums are yearly paid to foreign countries for sugar, as the following table shows, viz:

| | | | |
|---|---|---|---|
| 1832, | imported into the U. States, | | $2,933,688 |
| 1833, | do | do | 4,752,843 |
| 1834, | do | do | 5,537,829 |
| 1835, | do | do | 6,806,184 |
| 1836, | do | do | 12,514,551 |

This sum will annually increase in proportion as the population augments and their comforts and means improve.

By the adoption of this new branch of industry, the sums at present paid for imported sugar, would be in a short time a clear gain to the country; its agriculture would be improved, and thousands of acres of exhausted and deteriorated land would be again taken up and improved. To procure the necessary manure for this purpose, the farmer would be obliged to increase his live-stock, which would find, during the winter season plenty of food in the residuum of the manufacture. It would increase the consumption of sugar among the less wealthy class, and would make their condition of life more comfortable, and, of consequence, greatly extend the population of the country.

The manufacture of sugar is not confined to the beet and cane only. In Hungary, there are at present, manufactories which make *sugar from pumpkins*.—The following article, translated from the *Hannoverian Communicator*, 1837, gives the particulars, as follows:

"A manufacturer in Hungary, for three years past, has used pumpkins for the manufacture of sugar.—We have seen raw and refined sugar, also sirup from this manufactory, and found the refined sugar equal to the colonial in every respect. The raw sugar is crystalline, coarse-grained, light colored, and of more agreeable (melon-like) flavor than the common raw beet-sugar; the sirup is of a blackish green color, and has also a melon-like flavor, but is suitable for consumption. The juice, obtained by pressure, yields, on an average, six per cent of sugar. But the water melon of the south of Hungary is still more productive than the pumpkin of the north. The sugar obtained from the pumpkin is always considerable, whether the fruit has been raised on rich or poor land. The manipulation is said to be more simple than the manufacture of beet sugar, and requires less attention, as the pulp and the juice may stand for three weeks without getting sour, or losing any quantity of sugar. The juice, during the process of evaporation, does not rise in the boilers, and is not so liable to be burnt. The residuum is very good food for cattle. One acre produces 650 cwt. of pumpkins; twenty pumpkins yield sufficient seed for one acre of ground. From the remaining seed a very good table oil of about 16 per cent. can be obtained.

"MARQUARDT."

Indian corn, at the period of tasselling, yields just half as much sugar as the sugar-cane; and it is astonishing that this well known fact did not induce persons to plant corn especially for that purpose.

To make use of green corn and pumpkins profitably, and to improve the beet in quality and quantity, the following plan is, therefore, soggested, which would keep a manufactory in operation all the year round.

We know that the beet requires a deep soil, sufficiently provided with decomposed manure, as when planted in green manure they yield much less sugar, and the operation is rendered more difficult; to prepare the field properly for the beet, it should be well manured, (no matter in what state the manure may be applied,) ploughed, and planted in corn and pumpkins, and worked regularly as long as the pumpkins leave room for the horse-hoe. When the corn begins to form the tassel, it should be cut off and the sugar extracted from it. The pumpkin has then all the influence of the sun to come to full maturity, and should be used, when ripe, for sugar. The following year the field would be in first-rate order for the beet, and the following rotation of crops, viz:

Indian corn and pumpkins, with manure, } for sugar.
Beets,
Barley,
Clover,
Wheat.

An acre of good cultivated land yields, on an average, twenty tons of the beet-root. Beets were sold this fall, near Boston, for $5 per ton.

One ton of beets yields, when treated after the new method, 180 lbs. of *white refined sugar*. The cost of manufacturing a ton of beets into sugar would be, at very high estimate, $6. One hundred and eighty lbs. of refined beet sugar would cost $11, or 6 1-10 cents per pound, for which we now pay, at the lowest rate, 16 cents.

Mr. Norbert Rilliex, of New Orleans, has recently invented an apparatus for reducing saccharine liquids which has been patented in the United States, and is already tested.

This apparatus surpasses Howard's and Roth's, or any other invention of this description, not only in simplicity and cheapness, but also in the arrangement of the boiling of sugar, according with the laws of science and economy.

The liquor is reduced by two vertical cylinders, heated by steam, over which the syrup is distributed in small quantities. One of the cylinders operates under a vacuum, and entirely evaporates the condensed liquor by a low degree of heat, to hinder the formation of molasses—an improvement of the highest importance, which, till now, has never been accomplished. The syrup can be reduced to any degree of the saccharometer desired, which is performed by the most ingenious and simple contrivance of a differential thermometer. This apparatus will greatly facilitate the manufacture of sugar, in regard to the economy of labor, fuel, and time, and the perfection of the product. This apparatus will rank among the most ingenious and important inventions.

The production of indigenous sugar in France, was

one of the main pillars of *Napoleon's continental system*; and the successful extraction of sugar from the beet, was relied on as the surest guaranty of its stability.

That branch of productive industry, therefore, which the first statesman and captain of the age, regarded alike as the means of conquest, and the source of wealth and independence, cannot be considered a matter of indifference to the government of this great and growing republic, whose duty and privilege it is to watch over the interest and welfare of its citizens—a government aspiring to no conquest, yet whose enviable distinction it is to be regarded as the last hope of freedom—the last asylum of liberty.

The information imparted in the preceding pages, collected as it is from the most authentic sources, it is hoped will be regarded as of the highest importance to any and every government, charged with the duty of promoting the great interests of a nation.

Having traced the history and the progress of the manufacture of the beet-sugar, from its first discovery in Europe to the present time, through all its varied experiments and decreasing expenses, until no longer requiring the bounty of government, but yielding a revenue, the only remaining inquiry is, how shall the American people avail themselves of the important advantages of this new source of national wealth and industry?

To acquire a correct and minute knowledge of this new branch of industry, (now practically unknown in this country) it is necessary to visit Hungary, Germany, France and England, in order to examine all the recent and important discoveries and improvements relating to the manufacture of beet sugar. To accomplish this object, it would require the following qualifications:

1. A thorough knowledge of the old method of extracting sugar from the beet, and every apparatus hitherto used.

2. A thorough knowledge of agriculture, in order to ascertain the precise cost of the production of the raw material, the influence which it has on the different systems of agriculture, and the economy in regard to the feeding of cattle, &c.

3. A knowledge of chemistry and physics.

4. A knowledge of the languages of the different countries to be visited, and a thorough acquaintance with technical and vulgar terms in mechanics and agriculture, as well as the *patois* of the countries.

5. A knowledge of mechanics and the art of drawing, in order to be able to delineate any apparatus at first sight, and at a glance, as manufacturers are not always willing to have their apparatus examined minutely.

CHARLES LEWIS FLEISCHMANN,
*Graduate of the Royal Agricultural Institute of Bavaria.*

## FRUIT TREES.

The new method of raising fruit trees by planting the *scions*, is a great desideratum in the art of obtaining good fruit. It has many advantages over grafting, because it is more expeditious, and requires no stock or tree. They may be planted where they are required to stand, and the labor for one day will be sufficient to plant out enough for a large orchard after the scions are obtained. The method of preparing the plant is as follows: Take the scion as for grafting, and at any time after the 1st of February, and until the buds begin to grow considerably, and dip each end of the shoot in melted pitch, wax or tallow, and bury it in the ground, the buds uppermost, while the body lies in a horizontal position, and at the depth of two or three inches. We are informed that trees obtained in this way will bear in three or four years from the time of planting. We have no doubt of the practicability of this method of raising fruit. A gentleman in this vicinity the last season, planted about twenty scions of different kinds of pears, which appear to flourish.—The composition he used was melted shoemaker's wax.—*N. Y. Cultivator.*

## USEFUL INSTRUCTIONS,

### REGARDING THE MILKING OF COWS.

The operation of milking is performed differently in various parts of the country. In some, the dairy maid dips her hand into a little milk, and by successively stripping the teat between the finger and thumb, unloads the udder. This plan, however, is attended with the disadvantages of irritating more or less the teat, and rendering it liable to cracks and chaps, which are followed by inflammation extending to the rest of the quarter. This accounts for the disease occurring more frequently among the cows under the charge of one milker than it does in those which are under the charge of another; and, this practice is more common in some parts of the country than in others, it also accounts for the disease being more common in these parts. This plan of milking, where the irritation is not sufficient to excite the extent of inflammation to which I have alluded, frequently produces a horny thickening of the teat, a consequence of the cracks and chaps, which renders it more difficult to milk than when in its natural state; and at the same time predisposed to inflammation, when any case occurs to set it up. These effects may be, and are almost entirely avoided, by the more scientific plan of milking, adopted in other parts of the country, where, instead of drawing down or stripping the teat between the thumb and fingers, the dairy maid follows more closely the principles which instinct has taught the calf. (The calf jerks his nose into the udder and forces down the milk.) She first takes a slight hold of the teat with her hand, by which she merely encircles it, then lifts her hand up, so as to press the body of the udder upwards, by which the milk escapes into the teat, or if (as is the case when some hours have elapsed between milking times) the teat is full, she grasps the teat close to its origin with her thumb and fore-finger, so as to prevent the milk which is in the teat from escaping upwards; then making the rest of the fingers to close from above downwards in succession, forces out what milk may be contained in the teat through the opening of it. The hand is again pressed up and closed as before, and thus by repeating this action, the udder is completely emptied, without that coarse tearing and tugging of the teat, which is so apt to produce disease.

*Quart. Jour. of Agriculture.*

From the Farmers' Cabinet.

## MANURE.

*What is the greatest Quantity of Manure to be obtained from Given Means.*

Mr. Editor—There are in agriculture, as perhaps in every science, some leading propositions, calculated in a particular manner to arrest attention by their prominent importance. Such I hold that of the Subscriber, in your May number—"*What will an acre of land produce?*" and also the question which heads this article.

Were it possible at once to afford a complete and palpable solution to those two propositions, what mind can calculate the vast increase of treasures that would instantly become accessible to humanity? As, then, we cannot inquire too strictly, or know too much regarding them, I propose, after recapitulating a few of the principal statements of a "Subscriber," concerning the latter question, to furnish my own experiments upon the former.

He informs us that a single acre of land, *with abundant manuring and superior cultivation*, was made to produce the sum of $348 40 per annum, for five successive years, besides the vegetables used in a small family. He further states, in substance, as his present conviction, that the quantity of soil cultivated has nothing to do with the secret of gathering money out of it; that "this altogether depends on a judicious selection of soil, *on the facility of obtaining manure*, and on the proper application of its food for plants," &c.—that he found, by actual experiment, made upon a large scale, "that the profit of capital laid out in land produced an interest of only *five* per cent. per annum, the capital laid out in manure upon the same land produced *twenty* per cent."

Now, my own experience, as I shall presently show, abundantly confirms the probable accuracy of all these statements. Let us distinctly understand, then, that it is not the great quantity of land, but the *abundance of manure* upon a little, that is alone required to give wealth and independence; that the man who owns five or six acres, may (according to the above data,) with the aid of manure and good management, draw $1,800 from them each year, while he of a hundred acres may scarcely obtain half of it upon the common plan.

But where is the requisite manure to be obtained that shall so suddenly and surely enrich the farmer? In reply to this I will simply give my own experience, and by it endeavor to convince the reflecting farmer what amount can, and in fact *has* been made from means incomparably more limited than is generally imagined possible.

Previous to 1829, I had followed in Philadelphia a sedentary occupation, which by excessive application in it, had so enfeebled my constitution, that I was obliged to seek in the country for that measure of health which I might no longer hope for in the city. So I bought, with my scanty savings, a place of ten and a half acres, and moved upon it the same fall of 1829.

Not being acquainted with farming, I hired a man to plough two and half acres, and sow it in rye. The cost of seed and labor, in putting in, gathering and threshing the said crop was $8 56. The crop yielded five and a half bushels of very poor black rye, fit only for hay feed—say at forty cents per bushel, (as good rye was then selling at fifty and fifty-six cents per bushel) was worth $2 29, and the nett loss sustained upon farming the ground was $6 36. The season was moderately good for grain, and the two and a half acres rather a favorable specimen of the rest of my land! I planted a potato patch the following spring, (1830,) of about the fourth of an acre, which I manured in the hills with one load of marl only, and the crop yielded but three and a half bushels.

Being a total stranger to the nature and character of soils, but having previously, from some cause, entertained the notion that land in general produced about twenty-five bushels of wheat, or forty bushels of corn; or four or five loads of hay to the acre, the conviction I had now received of the absolute worthlessness of my land, fell upon me like the shock of a thunder-clap. Discouraged by the greatness of my disappointment, but not quite confounded, I determined that manure, in future, should be every thing to me, and stand in the stead of both land and crop. Being greatly improved in health, by the change of situation and exercise, I plied my vocation with increased diligence for the maintainance of my family, and made it the amusement of my leisure hours and leisure moments to collect from every corner and pannel of fence, every thing that I imagined could furnish a vegetable nutriment, and placed it in the cow yard, so combined with the litter as to be absorbed and retain every thing of the putrescent character that might be deposited there. By such means I have gone on, every year increasing the quantity of my manure, to an extent that I believe astonished most of my neighbors. The following is a sketch of the means I possessed, and the methods I took to obtain manure for the present year.

I commenced last summer by collecting into the outer part of my hog pen every thing of the weed kind I could find about the place, till I had a layer about twelve inches deep, which I covered with a layer of earth about five inches thick, continuing the process till the pen was filled to about two and a half feet deep. In the fall I littered my

loose corn cobs and the principal part of the buckwheat straw into the pen, interspersed with layers of earth in the same manner. The two stalls of my stable I served also the same, taking care to save therein all the chaff and refuse straw after threshing. In these stalls I poured weekly, through the fall and winter, for I had no cattle in them except in bad storms,) the soap suds and such putrescent fluids that might be obtained, keeping the corners and outsides, and under the mangers carefully satured.

As soon as my corn was gathered in the fall, I cut the stubs close to the ground, and wheeled them immediately, *while yet heavy*, into the barnyard, where I packed them in every part of it, and also under the shed, being an area of ground about forty feet by twenty, and in a few days covered them also with a layer of earth from a fence-row, close by, to the depth of about eight or ten inches. Upon this earth I foddered my three cattle during the winter, occasionally depositing more earth upon the litter, as fast as it collected there.

Your readers will readily judge that the object of all this preparation was not so much for the sake of saving the materials collected there, as to obtain a menstrum, or rather *sponge*, if I may so call it, calculated to absorb and retain all the urine deposited in the yard during the winter.—The compost masses, however, or layers, thus collected together, are not to be considered as manure prepared for the soil, but only as *materials* that require to be thoroughly *mixed* in order to reduce them to a state fitten for a rapid and complete incorporation with the soil. Accordingly, with this view, I commenced late in April the operation of turning it, which, from its having become closely packed to the depth of twenty inches, with the stalks at the bottom, could only be done with the aid of the grubbing hoe, turning it in strips about a foot wide, reaching across the yard, and throwing the loosened manure back a sufficient space to allow a trench between, wide enough to work in. After removing the whole oover from the stalks, a strip, as before mentioned, they were easily grubbed up, by first cutting them through all along the solid edge of the strip with the hoe, it being made pretty sharp for the purpose. In addition to this pile of yard manure, I have also emptied the contents of my hog pen and stables, extending the pile several feet, and laying upon the ground when first loosened, more than two and a half feet deep. Of this manure I have used sixteen loads this spring, for truck and garden, and, judging from the size of the pile yet remaining, there cannot be less than sixty loads, which being turned once more, I intend to use for wheat next fall.

In this manner, from only three head of cattle, and the fattening of four hogs, I have made from seventy to eighty two-horse loads of manure, the highly fertilizing qualities of which are abundantly attested by my own former experience. I will not say that it is stronger than the best barn-yard manure, but from its closer affinity to the nature of the soil, and greater facility for being rapidly combined and incorporated, without loss by evaporation, I have no doubt it will be frequently found, upon trial, more effective and more durable.

In the process of turning manures, thus prepared, I hold it of the highest importance to mix well the earthy and vegetable parts together.—Few are perhaps aware how rapidly the earth facilitates vegetable decomposition, and to what a surprising degree *it absorbs the excess of fertilizing effluvia*, which must otherwise be evaporated during the process of decomposition. This circumstance, I believe, taken in connexion with the careful economising of all animal excretions, constitutes chiefly the great secret (I might, perhaps, add *alleged* necromancy,) that has added already so much verdure to my previously exhausted soil, and been so profitable to me and so surprising to my neighbors.

No farmer can imagine, that has not tried the experiment, what a prodigious quantity of rich vegetable and fibrous earth may be collected from corners and by-places which lie out of the way of cultivation, and which from their retired position, have perhaps, never so much as attracted his notice. All such refuse trash and fibrous earths and weeds, by being conveyed to his barnyard, at intervals, during the fall and winter, and judiciously combined with its contents, will be converted into a rich, fertilizing and durable matter, merely by absorbing and retaining *that excess of putrescent fluids and effluvia* which is otherwise lost by filtration and evaporation; that is, by soaking away and drying up.

W. H.

Pittstown, Salem co., N. J., May 20th, 1838.

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"Will you let me have a few articles out of your store on credit?" asked a new customer of a Quaker merchant.

"Well—I don't exactly know;——when thee re-sets thy fence in the spring,—does thee set it inside or outside of where it stood before?"

"Why, I set it outside, and clean up the row where it stood."

"Does thee?—well, thee shall have credit in my store for any thing thee wants!"

*Greensborough Patriot.*

*From the Cultivator.*

## THE ADVANTAGES OF CAPITAL ON WORN-OUT LANDS.

GREENE COUNTY, VA. 17th Dec. 1838.

To get rich is to enrichen my land.

The above, Mr. Buel, is my Motto. Instill this in the minds of the farmers, and the work is half done. And to the present period my motto is pretty well developed. Nine years ago, I came in possession of my farm by purchase, which is situated at the base of the Blue Ridge. The then state of it was most chilling, but the situation much to my taste; the place, for then it could not be called a farm; no way the eye could be turned, but presented galls, gullies, broomsedge, briers, bushes, and some forty acres of wet land. The latter first engaged my attention. Within the first two years I expended $400 in dithing, and about the same amount since, which has fully come up to my expectations—having put the land in a high state of production. Secret ditches I mostly use in draining, leaving no more open than necessary, which is governed by the length of the ditch, and the quantity of water to be conveyed; if too long and they should get choaked about the source, the work will be all to do over—but this I have never had to do yet. At all times a secret should convey the water, for when all of the chinks of the ditch becames full, the water will spout to the surface, and drown the crop, which sometimes happen in long wet spells. My mode of secrect ditching, is with rock. All other ways, such as with poles, brush, &c. are ineffectual or but temporary; but I have not yet done draining; the want of means only has retarded this improvement as well as others on my farm.—Within the first four or five years of my maiden farming, the expense considerably exceeded the income so much so, that about the end of that period I had sunk about $1200, more than half of the prime cost of my farm, which is 400 acres. At this time I was much dejected—I endeavored to make sale, but no body was willing to add the improvements to the first cost, and the consequence was of course no sale. By this movement not a link in the chain was broke. I renewed my efforts, and have the pleasure to say, the sunk fund is all discharged as well as some eight or ten hundred dollars worth of property acquired besides.

No person that knew my farm at the time I purchased it, but will now agree it is worth four times as much as the prime cost, and I think six times. The galls, gullies, briers, broomsedge, have all disappeared; also the rock taken off, and secret ditches. Not a spot, of 200 acres in cultivation, but what will produce a good crop of corn or wheat, and a good portion that was literally exhausted, will produce a good crop of tobacco; but that plant I have not yet cultivated, but notwithstanding, I am well satisfied I have increased my property much faster than the largest tobacco grower within my knowledge, in proportion to capital employed. The improvement of my farm now, is much more rapid than a few years past, and under the same management, of course will annually increase as well as the profits. This year it clears me about $700, from 3 hands; you no doubt from the above, and self made farmer will think it is coming on very well—and besides I will add, this farm was located upwards of a hundred years previous; of this, there is no doubt—for on a chimney I pulled down, the date of 1746 was marked upon it; and this chimney as tradition tells it, was put up by the second or third, settler, and since the builder of that chimney sold it, it has passed through several owners, and all have been compelled to abandon it; and notwithstanding it has been located such a period, not an individual as yet has died the owner of it.

With these few preliminaries I stop and refer to your decision. If they prove fit for your valuable paper, more anon—if not, I will no more mix a goose quill with my ploughing, manuring and clovering, for upon these three things I rest my life. Your ob't ser't,

T. G. GARTH.

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*From the Southern Cultivator.*

## CORN-SUCKERS.

*Mr. Clayton:*—

My eye has accidently fallen upon the following paragraph of a letter from a Virginia farmer, published in the Farmers' Register, which I would be glad you would place before your readers. If correct, this statement is a valuable one. It opens up the (to me) new and labor-saving belief, that corn-suckers, so far from being injurious, are efficient auxiliaries in producing a good crop of corn. Suckering corn is certainly quite a troublesome job—and if it is wholly useless, the sooner the fact is generally known, the better. *Experiment* is the great mother of improvement. Let some of our careful farmers give this a fair trial by dividing a small field—suckering one half, and leaving the other half unsuckered, and see what the difference in the yield is.

"*Charlotte, June* 20,

* * * "Whilst my pen is in hand, and paper before me, I will give you a correct statement about the corn-suckers alluded to in a publication of yours some time last summer in the Register. I counted 106 hills of corn which threw out 139 suckers—92 of them bore good and measurable ears—47 produced no ear, that is, no measurable ear. Some of the hills produced three suckers, and each sucker a good ear—others produced two. Sometimes each would be a good ear—then again there would be no ear at all. I could not discover any injury sustained from the sucker whatever. It occasionally happened, that the main stalk, throwing off two or three suckers, produced of itself two good ears; at the same time the suckers doing their part.

Yours, respectfully,

T E. WATKINS."

The Editor of the Farmer also adds:—

"Mr. Watkins has practised this plan for several years, and entertains no question but that he *profits* by letting the suckers alone—and it is unlikely that *he* or *other* judicious farmers of his county, can be far mistaken in this *general opinion*."

I should be glad to have the views of some of your readers—*practical farmers*—on this subject; and over their *propet signatures*, if they please.

A NEW BEGINNER.

*From the East Tennessean.*

## AGRICULTURAL INTERESTS OF EAST TENNESSEE.

Bicknell's Reporter contains a paragraph from the pen of Major Noah, in regard to the value of lands in Dutchess county New York, which to the farmers of this section of country may appear surprising, as well as interesting;—it is as follows.—"The extraordinary quantity of farming produce brought down from Dutchess county in the two boats, has re-awakened attention on the fertility of her soil. A recent farm of 230 acres, brought without scarcely any buildings upon it, $23,000. Another of 130 acres, brought $110 an acre."

This county (Dutchess) was once much improverished by the skimming process of farming. Like many parts of East Tennessee—large tracts of land were in cultivation, and annually ploughed without manuring, until the county was remarkable for its barrenness; and the timber, particularly, from the careless habits of the farmers, was nearly destroyed. Fortunately a better system was introduced, by a few enlightened individuals. The culture of clover and grasses, as in Maryland, with the root culture, manuring, draining, &c., with improved breeds of stock, particularly sheep, reclaimed the soil, and the farmers encouraged by success, have carried their improvements to an extent which has surprised themselves, and made their county one of the richest farming districts in that end of the State. In Buel's Cultivator of last year, it will be found, that the number of sheep in Dutchess county are but a trifle short of 235,000. The greater part of the wool is manufactured in the county. It is found that the sheep are not only profitable for their increase, and annual fleece, but contribute to the fertility of the soil, keeping the farms free from briars, noxious weeds, &c. Notwithstanding that the average price of land is over $100 per acre, it is still rising. We see from these facts, what encouragement there is for the people of East Tennessee, to enter on this branch of industry.

With the exception of coarse jeans, there is little or no cloth manufactured in this part of the country; and in a district like this, abounding with the finest sheep pasture in the world, and water privileges for manufacturing purposes, unsurpassed, what is to prevent our population from being entirely independent of northern manufactures for their supplies, or even to furnish other parts of the country, not so highly favored with the article of woolen cloths, or at least the raw material? No country is better adapted to the growth of wool, than East Tennessee; or has greater natural advantages for manufacturing it into cloth. If wool of good quality was grown by our farmers, it would be an encouragement to manufacturers to establish themselves here. It will be found on examination, that the value of woolen fabrics manufactured in Massachusetts alone, exceeds 14,000,000, of dollars annually and the value of all articles to be over $91,000,000. In East Tennessee, the soil is far superior to that of Massachusetts; her natural resources in all respects greater; and whenever a communication is opened with Charleston, her means of getting her products to market, will be sufficiently great, to enable her with her superior natural advantage, to compete with her northern neighbors, in producing many of those articles for which she is at present depending for supplies upon them.—We think that the interests of East Tennessee are deeply involved in promoting as staples, the growth of the two articles of wool and silk, and favorably situated as she is, we think that public sentiment should become awakened to the importance of these subjects. We shall as we have time, revert to these matters again.

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*From the American Farmer.*

## TRANSPLANTING CEDARS.

HUNTSVILLE, Ala., July 12, 1822.

*John Skinner, Esq.*:

Sir—I observed in your last No. information is requested as to the proper season for removing cedars, hollys, &c. Having but little experience on this subject, I can only state the fact, that in February last I transplanted six cedars, about 18 inches high, all of which took root and are now in a thriving condition; the season was very wet and unfavorable for transplanting generally; at the same time I removed from the mountains to my yard, the tulip poplar, (Liriodendrum tulipa.) mulberry and locust, which have all succeeded well. But, although I have been successful with my cedars, a planter a short distance from town, informs me that he made the experiment almost every month in year, without succeeding, until at the recommendation of a friend he planted them in August, in which case every tree took root, and he has a double row of perhaps 50 or 60 feet, of the most beautiful cedars I have ever seen.

SAMUEL HAZARD.

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## LIME YOUR ORCHARD.

The effect of lime on orchards and on grounds in which fruit trees are planted, is stated to be very beneficial; it improves their health and promotes their growth, and is said to improve the quality of the fruit. The food or pasture of the trees is increased in quantity, and improved in quality by the application, and it is doubtless an important agent in destroying the grubs and worms which are so destructive to fruit trees by the wounds which they inflict, as well on the tender, absorbent fibres of the roots, as on the branches and trunk.

The good effects of lime on apple and peach trees is perceptible in a short time, and it is believed equal benefit will be derived from its application, by all other kinds of fruit.

Let us try it without delay, for it is universally known that good fruit is never produced by an unhealthy tree.—*Farmers' Cabinet.*

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FRUIT TREES.—The soil round fruit trees which do not stand in cultivated ground should be spaded for two or three feet on each side. This is absolutely necessary for young trees.—*Gen. Farmer.*

*From the Farmers' Register.*

## ON THE CULTIVATION, PRODUCT AND USES OF BROOM-CORN.

Read before the Agricultural Society of Fredericksburg, and ordered to be published in the Farmers' Register.

The establishment of a broom factory, in the town of Fredericksburg, may probably render the culture of the broom-corn an object of some importance to the farmers in the vicinity. Thus far, we have had little or no practical knowledge of the extent of the crop which may be gathered from any specific quantity of land, or of the value of the product. Ten or twelve acres have been cultivated by Mr. C. H. Hunt and myself, the present year; but we have made no estimate as to the amount per acre, either of the brush, by which is meant the broom part, deprived of the grain, with about six inches of the stalk, or of the grain. Nor, had we procured this information, could it have been considered a fair experiment, or a safe guide, the land being thin and exhausted, and the season unusually dry and unpropitious. We design, the next year, to measure our land, and make a careful and complete experiment, the result of which shall be laid before the society. From information obtained from Connecticut, where this article is extensively cultivated, it appears that the product per acre ranges from 200 to 1200 pounds of the brush, and from 20 to 120 bushels of grain—ten bushels of grain being considered a fair estimate for every 100 pounds of brush. It is seldom that the quantity of brush falls below 400 pounds, and not often that it reaches to 1200 pounds—perhaps a fair average would be, 600 pounds brush, and 60 bushels of grain. The grain is considered at least equal to oats for horses and cattle, and superior to buck-wheat for hogs. It is not known what will be a fair average price for the brush in our market. The manufactory is yet in its infancy, and the proprietors have not ascertained what price the market for their brooms will justify them in giving for the brush. But suppose the price of brush properly cured, of a bright and lively color, to be five cents per pound, and the quantity produced to be 200 pounds below the New England average, say 400 pounds per acre, the producer would get $20 for his crop, equal to five barrels of corn, at $4 per barrel, and 40 bushels of grain in every respect equal to oats, for all purposes for which they are used on a farm. It was not my intention, however, in making this communication, to enter into any speculations as to the probable value of this crop, or to present estimates founded on data so imperfect and uncertain, but merely to state our actual experience, as limited as it is, of the value of the grain. We work mules altogether. Last year, we cultivated a few acres in broom-corn, from which we obtained over 100 bushels of grain. Since the first of January, our mules have been fed exclusively on this grain. For the first few months it was ground and mixed with chop; but the stoppage of the mills, from the drought, rendered this mode of feeding impracticable, after the middle of July or the first of August; since which time, we have fed on the grain, unground, moistening it with water, a few hours beforehand, to soften and cause it to swell and expand. The mules seemed as fond of it as of any other food—have continued throughout in excellent order, and our manager informs us, they have worked with as much spirit and as briskly, as any which he has ever had the management of.

I fed my cow, also, on this grain, for some weeks, during which, there was a sensible increase of the quantity of milk, beyond what she yielded when fed on bran and chop, the usual food of our cows in town. In preparing it for the cow, boiling water was poured over it, and it was kept well covered in a close vessel, until the grain expanded and became soft. In this state she ate it with great avidity.

Ground, and properly prepared, it has been used as a substitute for corn-bread, by several individuals in our neighborhood, who speak very favorably of it. Its appearance, when cooked, is dark red, very similar to rye-bread, and like it, it contains a considerable portion of mucilage and vegetable gluten, which I have no doubt renders it highly nutritious. Deprived of its husk, which gives it the dark color, by a process similar to that employed in cleaning rice and barley, it will probably become an agreeable and healthy article of diet, and a valuable subsitute for Indian corn, which it very nearly approximates in taste.

WILLIAM BROWNE.

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*From the Genesee Farmer.*

## ITEMS IN DOMESTIC ECONOMY.

To separate wax from the impurities of the honey comb, put the comb into a bag, place it in a kettle of cold water, tying a small stone or other weight to the bag, to prevent its floating, and hang the kettle over a fire. As the water becomes hot, it melts the wax and causes it to rise to the surface by passing through the pores of the bag, while the impurities remain.

Medicines should never be kept in papers, but always in bottles and vials; and care should be taken that whenever procured they be always immediately labelled. Serious accidents have sometimes occurred, and lives lost, from neglect in this particular, by administering powerful substances through mistake.

It often happens that ground glass stoppers of vials and decanters become so tight that it is impossible to draw them out. To remedy this difficulty, apply the hand, which has been previously heated before the fire, to the neck about the stopper, and by heating it, and thus causing it to expand and consequently to increase the orifice about the stopper, it will render the stopper easy to be removed. If the warmth of the hand is not sufficient, apply a cloth dipped in hot water.

Strong paste is made by mixing flour and water while cold very thoroughly, the water to be in such proportion that when mixed it may be quite liquid, and then boiling it till it is of a glutinous nature, stirring it constantly. The strength is much improved by adding, while boiling, from one-fourth to one-sixth of the weight of the flour in powdered alum. As rye is more glutinous than other grain, it makes a strong paste; when made into paste with alum, it is nearly as strong as glue.

To prevent rust on steel instruments, rub them over while warm, with white wax, then melt the wax before a fire, and continue to rub it with a cloth, until the original polish is restored.

Cranberries may be preserved for a long time by drying them partially, and corking them very closely in bottles. A coat of sealing wax over the cork would be advisable.

To make court-plaster, take very thin silk, dip it in a solution of isinglass (or fish glue) with water, and after it becomes dry, dip it several times in the white of an egg.

A very good material for blacking shoes and boots, may be made in a few minutes by putting half a teacupfull of lamp-black in a tin basin or dish, adding the white of an egg, and rendering it sufficiently liquid by adding and mixing thoroughly with it, a quantity of vinegar. The only labor is mixing the materials, which do not very readily incorporate.

To make cement for glass or earthenware, take unslacked lime, the fresher and finer the better, pulverize it in a mortar, and sift it through a fine sieve or coarse muslin. Mix this thoroughly and rapidly with the white of eggs, so as to form a thick paste, and use it immediately. Broken dishes may be mended with this cement, and if neatly and skilfully done, adhere very strongly. Isinglass dissolved in alcohol is also strongly recommended as a good cement for this purpose.

An effectual mode of preserving eggs, is to oil them all over when fresh, and lay them in a box. Fill the box and turn them over every day.

Whatever you use frequently, buy by the quantity, especially whatever is obtained in bottles or boxes. For instance a sweet oil bottle holds more than twice as much as a flask, but does not cost twice as much; or a large box of blacking is cheaper and much more convenient than the same quantity in small boxes.

True economy dictates the saving of every thing not wanted at present, but which may be useful hereafter. Hence separate and suitable boxes, placed in very convenient situations, should be appropriated respectively to iron rivets, staples sheet iron, old nails of different sizes, pieces of leather, twine, wrapping paper, rags, buttons, &c. They can then be readily found when wanted.

Where books, with common polished backs, have had the polish rubbed off by chafing, it may be easily restored by rubbing them over with the white of eggs, and when dry burnishing the leather surface with a rounded piece of ivory, or other similar hard substance.

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Making Butter.—Milk or cream, if you would have good butter, should never be allowed to become very sour before churning; if very sour, be assured, if the butter is not rancid (old tasted) when first churned, it will shortly become so.—Oxygen attracted from the atmosphere, is the cause of sourness; it is also the cause of rancidity in butter, lard, bacon, or any other substance principally composed of animal fat, and is the active agent in causing metals to rust. Perhaps some one will ask, what is oxygen? It is a constituent part of atmospheric air, without which, a fire, or candle, will not burn, it is also essential to the preservation of animal life. It is a colorless, invisible gas. As we said, it is the cause of sourness in milk and rancidity in butter, consequently, if we want a choice article in the butter line, the milk should not be very sour; if, however, the milk should be too sour, the excess of acidity may be neutralized by dissolving a small portion of salæratus or pearlash, and adding it to the milk. It sometimes happens that it is almost impossible to procure butter, even of an inferior quality, from very sour milk, owing to its sourness. When this happens, use the salæratus if you have it; if not, the pearlash, and you will directly obtain butter.—*Maine Cultivator.*

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Washing Trees.—Lie from wood ashes or from potash, makes the best wash for trees. It should not be applied until May or June, when it will kill the moss and all the insects that adhere to the bark. There is a small animal resembling a louse to be found on most young trees. They never appear to move except in the month of June, and then they are not great travellers.—The lie above named, if put on in June, effectually clears the tree of this insect.—*Ib.*

*From the Southern Cultivator.*

## PALMA CHRISTI BEAN.

D. CLAYTON:—I have noticed in your Agricultural Journal you mention of the culture and magufacture of the Castor Bean by myself, with a request that I give you the mode of cultivation and the process necessary to procure the oil. It affords me much pleasure to give any information that may be the means of cultivating a plant so well adapted to our climate and soil. Almost every part of Maury, and a great part of Marshal will produce it in great abundance. It grows best in gently rolling beech and poplar land, there is no crop I have ever noticed, that is so much improved by manure as the Palma Christi It should be planted as early in March as the season will admit, as we do corn, in checks—one stalk at each check to remain standing. Three or six beans are planted in a hill to insure a good stand. In thin land it should be planted a little closer than corn. It requires about the same culture as corn, and produces from ten to twenty-five bushels per acre. I have heard it from good authority that as much as fifty bushels have been gathered from one acre. It begins to ripen the last of July, and continues to ripen and grow until frost. It is gathered by cutting the pods as they ripen, which are thrown on sleds drawn by horses. A yard is prepared, called a poping yard, made like that for drying brick. The firmest ground of course will be chosen its size will be in proportion to the amount of land in cultivation, upon which the pods as they are taken from the stalk will be laid. A few days of sun will free the beans from their covering; the hulls are cleaned from them by a fan, such as are used for cleaning wheat.

For pressing the oil, I use wrought iron screws, stocked in the manner of stocking screws for pressing cotton.

I concur with you in the opinion that farmers might employ a portion of their grounds to good advantage in the culture of the bean, for the following reasons:

1st. It should be planted before it is proper to plant corn or cotton.

2nd. It could be worked before corn or cotton would need working.

3d. The gathering would be between the laying-by of corn and the picking-out of cotton; besides it greatly improves the production of other crops that are planted after it. Whether it be the shading of the ground during the warmest part of summer, or the effect of a change of crop, I cannot tell, but the increase of the crops planted after the Palma Christi on my plantation has been at least 25 per cent.

Yours, very respectfully,
W. I. ANDERSON.

Marshall county, Feb. 4, 1839.

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## PEACH TREES.

A speach trees greatly exhaust the soil, it is probably the cause, in some measure, of the failure of crops. Cultivators would do well, occasionally, to remove the exhausted soil from around the roots of the trees, supplying its place with good earth. Coal dust from the blacksmith forge, and wood ashes, are a valuable nourisher of the peach tree. It is also said they are an antidote against the worm which preys upon the peach tree at the surface and causes such a lamentable destruction of them.

The peach, also, at proper times, needs more pruning than any other tree, to keep it in a luxuriant growth.

It has been asserted, as the result of an incidental experiment, that squashes sown in the fall will survive the frosts of winter and spring, and will mature much earlier than any which can be sown in the spring.—It is worth a more satisfactory experiment. The earliest sallads, we know, are grown in this way.

Young trees should not be planted where the decaying old roots are, as they are receptacle of numerous worms, which seek their food in the roots of the young trees, and open the sap vessels so that the sap instead of nourishing the trees, flows to waste in the earth, and causes the loss of the tree.

Deep digging is essential to the growth of young trees, in order that the rain water may filter under the roots, which otherwise would be rotted by stagnant water remaining around them.—*Colum. Journal.*

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## APPLES.

Our readers need not be told of the value of this fruit. The numerous varieties of delicious fruit that an apple orchard may be made to supply from one end of the year to another—the multiplied luxuries which it affords in the shape of tarts, pies, puddings, and sweet-meats—and the vast amount of food for stock which a large and well cultivated orchard produces, are too generally prized to require recommendation. —The first settlers of a country, however, among the numerous objects demanding prompt attention, are in danger of neglecting the cultivation of fruit longer than is necessary.

If apple trees are to be raised from seeds, it is admitted by all that fall is the proper time to sew them. The seed may be sown in beds prepared as for garden seeds, and should be covered nearly an inch deep.

Dr. Van Mon, says, that trees, produced from the seeds of young trees, will bear fruit much earlier than those raised from the seeds of aged trees.—*Prairie Bee.*

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TO KEEP BUTTER FRESH.—Work the milk thoroughly out, salt it well, and pack it away in well seasoned white oak kegs, or jars, so as to exclude the air as much as possible. Analogy teaches that rancid butter may be made fresh by putting it into a churn with a small portion of fresh milk, in which some salæratus has been dissolved, churning it, and then taking it through the same manipulations as newly churned butter. There is a difference of opinion amongst dairymen as to the best method of salting butter. We will hereafter notice this subject.

*Maine Cultivator.*

## CABBAGE.

Although this is a common garden production, very little attention is given to varieties, or to a succession for the table, and size is regarded rather than quality. Cabbages may be in use ten or eleven months in the year. The early sorts, if the plants are reared in a hot-bed, may be fit to eat in July, and Savoys keep good till May.—Every farmer understands the culture of this plant; but few have experienced the advantages of transplanting them *twice*, i. e. first from the seed bed where they are generally crowded, and have crooked stems, into a bed of rich mould, at four to six inches apart, which is termed *pricked out*; and secondly, when they have become thrifty, and of good size, into the place where they are to head. A hundred may be pricked out with a dibble in a few moments, and the plants are rendered doubly valuable by it. The dibble is a sharp pointed stick, with which a hole is made for the plant, and when it is inserted in it, the earth is pressed to the root. The Savoy is the most delicate and keeps best for late spring use. Cabbages keep well during winter in a trench, the heads down close together, and roots even with the surface, covered merely with earth; but they should be thus buried in a dry soil, and as late as possible before winter sets in. Cobbett recommends, as the best mode of preserving cabbages in winter, as follows:

"Lay out a piece of ground four feet wide, and as long as is required for your cabbages. Dig on each side of it a little trench a foot deep, and throw the earth upon the four feet bed. Make the top of the bed level and smooth. Lay some poles, or old rails, at a foot apart, longways, upon the bed. Then put some smaller poles, or stout sticks, crossways, upon the rails or poles, and put these last at five or six inches apart. Upon these lay corn stalks, or broomcorn-stalks, or brush of trees, not very thick, but sufficiently thick to cover all over. Then, just as the frost is about to lock up the earth, take up the cabbages, knock all dirt out of their roots, take off all dead or yellow looking leaves, and some of the outside leaves, besides; put the cabbages, head downwards, upon the bed, their roots sticking up, and cover them so thick with straw as for the straw to come up nearly to the root of the cabbage. Do not pack them quite close. It is better if they do not touch each other. Lay some bits of wood or brushwood, to prevent the straw from blowing off. If the frost catch you, before you have got the cabbages up, cut them off close to the ground, and let the stumps, instead of the roots, stick up through the straw. Out of this stack, you will take your cabbages perfectly green and good in the spring, when the frost breaks up; and to this stack you can, at all times go, in the winter, with the greatest facility, and get your cabbages for use, which you can to no other species of conservatory that I ever saw or heard of. The hollow part below the cabbages takes away all wet that may come from occasional rains or melting of snows, and the little ditches on the sides of the bed keep the bed itself free from being soaked with wet. Even if deep snows come and lie for months, as in Nova Scotia, New Brunswick and Canada, it is only removing the snow a little, and here are the cabbages always fresh and good."

We have no doubt of the utility of this mode; and to those who raise cabbages for winter and spring market, when the price is always high, Cobbett's directions are particularly worthy of attention.—*Maine Cultivator.*

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Orchards.—We are often inquired of as to the best time of trimming apple trees. Old dry limbs may be cut away whenever you have leisure, but green limbs would better be taken off later than this in the season. When trimmed as late as May, the wounds are sooner healed than when trimmed in winter. Large green limbs should never be cut from the tree; they are better there than on the fire—if trees are annually trimmed of the small interfering limbs, there will be no large ones in the way.—*Boston Cultivator.*

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*From the Maine Farmer.*

## PIGS IN CLOVER.

We have once or twice lately called the attention of those interested in raising pigs, to the importance of having a clover lot for them to graze in, during the summer. The following experiments tried some years ago by Mr. Jones near Dublin, shows the value of this feed for them. He was in the habit of keeping from 25 to 30 swine, by penning them upon clover, from May to October. His mode was to make a movable fence or hurdles sufficient to enclose a space about twenty yards square. This he moved every day. At night he drove the swine to the stye, and usually kept them in the stye whenever it rained. He fed them, when they run out, at night, with the wash from the kitchen, and butter-milk, &c., from the dairy. Two English acres of tolerably grown clover were ample for them during the season, as they went over it three or four times, and they manured the land in the mean time sufficiently for a good crop of potatoes another year.

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Morus Multicaulis.—The Savannah Republican states that the Chatham Silk Company, located in that county, had lately sold 600,000 morus multicaulis trees, all grown in that vicinity, to be delivered in November next.

## THOUGHTS FOR THOSE WHO THINK.

BY THE REV. W. COLTON, U. S. N.

Indecision is an evidence of weakness; for it evinces either a want of capacity to apprehend what is best, or a want of energy to pursue it.

Many are philosophers in great misfortunes who lose their equanimity in trifles. Their troubles resemble streams which ripple most where the water is the shallowest.

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Tokens of deference and respect are frequently the mere expressions of vanity. They flow from a supposed nearness to the objects which they thus familiarly recognise and honor; and remind us of the goose, which, passing under an arch, however high, lowers its head.

They who occupy the most eminent stations have the most at stake in preserving the public tranquility; for, in popular convulsions, as in earthquakes, the highest objects are the first to topple and fall.

Some editors cast themselves so far beyond those courtesies which exist between well-bred men, that they find in their very position an exemption from responsibility. No man who has clean apparel himself, will return the mud-balls with which he may be assailed by one who has taken up his stand in the ditch.

Scurrilous epithets are like foul birds, which transiently disturb and disfigure the foliage of the trees on which they light, but whose nature is never mistaken, for they carry on their feathers the pollutions of the nest in which they were hatched.

If a person is bent upon quarreling with you, leave him to do the whole of it himself, and he will soon become weary of his unencouraged occupation. Even the most malicious ram will soon cease to butt against a disregarding object, and will usually find his own head more injured than the object of his blind animosity.

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MAMMOTH HOG.—Robert Alexander, a substantial farmer from Jackson, Washington county, has raised and sold to George Swartz, of this city, for $200, a "leetle the largest" hog that was ever dreamed of. This noble porker is now two years and eight months old, and weighs SIXTEEN HUNDRED POUNDS. It is supposed, by good judges, that he will lose 150 pounds in dressing, which will leave his useful weight 1450 pounds. He measures eight feet nine inches in length, and is regarded by *connoisseurs* as the largest animal of his race, ever raised in America. This is the second hog that Mr. Alexander has raised to the enormous weight of over 1400 lbs.

*Albany paper.*

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PUBLISHED BY EMMERSON & DEADERICK.] [J. F. DEADERICK, EDITOR

VOL. IV. JONESBOROUGH, JULY, 1839. NO. 7



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## TENNESSEE FARMER.

*Jonesborough, July, 1839.*

### Sugar.

This article which has so imperceptibly passed through the gradations of a medicinal nostrum, an expensive luxury, a condiment of general use, and, at last, of indispensable necessity, in most civilized countries, was known so early as the days of Herodotus, who mentions an African tribe called the Zygantes, as using what was then called "honey made by men," as contradistinguished from the honey of bees, which was no doubt the saccharum of vegetables, but not in a state of chrystalization. Other early authors refer to the same article; but not until near the commencement of the Christian era is it mentioned under a proper name and form; and there is no evidence until the middle of the second century, that the juice of the cane was extracted by mechanical art, previously to that period.

The first spot in Europe upon which the sugar cane was planted, was the island of Secily, where it was cultivated by the Saracens about the beginning of the ninth century; and to this wild, war-like and yet ingenious people, it is said, that the modern world is indebted for the introduction and manufacture of this great staple. How early it was known to them, is not accurately ascertained.

From Sicily the sugar cane was transplanted to Portugal and Spain; and after the discovery of America, the *art* of sugar *making* was introduced, by these States, among the West India Islands; but there can be little doubt that valuble varieties of the sugar cane are indiginous to this continent and its adjacent islands. Its value was not understood, however, until the introduction of European operatives; although it is well ascertained that the natives of Mexico extracted sugar from the stalks of the Indian corn, and that the aborigines of Virginia and other North American tribes, were acquainted with the manufacture of sugar from the juice of the maple.

The increase of this staple as an article of consumption and commerce, since the commencement of the production in this hemisphere, has been rapid beyond example. For a century and a half, dating from about the year 1568, St. Domingo monopolized and supplied the markets of all Europe, exporting, in one year, 145,000,000 pounds. Now, Great Britain alone annually consumes 400,000,000 pounds; France, 230,300,000; and the total annual consumption of sugar in Europe is now 1,267,000,000 pounds. The total consumption throughout the whole world, is 6,267,000,000 pounds. The ratio of

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